

### **REMARKS/ARGUMENTS**

Prior to this amendment, claims 1-29 and 31-36 were pending. In this amendment, claims 2-9 and 26-29 are amended. In order to expedite issuance of allowed subject matter, claims 1 and 18-25 are canceled without prejudice and without disclaimer. No claims are added. No new matter is added. Thus, after entry of this amendment, claims 2-17, 26-29, and 31-36 are pending.

#### **Claim Objections**

Claims 2 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 2 has been rewritten in independent form. Thus, claim 2 and its dependent claims are believed to be allowable.

Claim 26 has been rewritten in independent form. Thus, claim 23 and its dependent claims are believed to be allowable.

#### **Claim Rejections under 35 USC § 101**

Claims 29 and 31-36 are rejected under 35 USC because the claimed invention is directed to non-statutory subject matter.

The Supreme Court has recognized two instances in which a method may qualify as a section 101 process: when the process “either [1] was tied to a particular apparatus or [2] operated to change materials to a ‘different state or thing.’” *Parker v. Flook*, 437 U.S. 584, 588 n.9, 198 USPQ 193, 196 n.9 (1978) and MPEP 2106(b). When the second criteria is applied to the transformation of an intangible item (such as data), a useful, tangible, and concrete result is required. See, e.g., *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1601 (Fed. Cir. 1998). Also, see page 21 of the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility” and MPEP 2106(IV)(C)(2)(b).

Regarding the first way of satisfying § 101, claim 29 recites “[a] method of operating a programmable logic device,” which thus ties the claim to a particular apparatus. The

claim is even more specific as to the particular apparatus with the recitation of a first to third LUTs and the multiplexer. Thus, claim 29 is tied to a particular apparatus, and § 101 is satisfied.

Regarding the second way of satisfying § 101, the method transforms the programmable logic device to a new state, e.g., a state where a result is output from the adder.

Additionally, a practical result (application) is that the programmable logic device is able to add 3 numbers efficiently while still remaining configurable to perform other operations. The result is not simply that 3 numbers are added, but that specific circuits manipulate and transmit electronic signals in a specific manner to achieve the result. Thus, a mathematical formula is not being claimed.

In other words, certain electronic parts of the PLD receive, transform, and send signals in a particular way, just as many other issued semiconductor and circuit patents act on signals to produce other results. Certainly, the Examiner does not assert that all of the numerous patented methods involving any electronic circuit are invalid.

Accordingly, Applicants respectfully request withdrawal of these rejections.

**Rejection under 35 U.S.C. 102(b), Cohen**

Claims 10 and 11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Cohen et al. (5,511,017).

**Claims 10-17**

Claim 10 is allowable as Cohen does not teach or suggest each and every element of claim 10. For example, claim 10 recites "*wherein the multiplexer selects the signal determined in the previous LE when the LE is set to operate in an addition of three binary numbers mode.*"

At page 4, the Office Action states that the adder (35) of Cohen always performs an addition of three binary numbers. In other words, regardless of which input the MUX 33 selects, the adder 35 (asserted LE) performs an addition of the three binary numbers. Accordingly, the criteria for which input is selected by the MUX 33 is not dependent on the operational mode of the adder 35.

In contrast, claim 10 recites that the selection of the signal is dependent on the operational mode of the LE, specifically whether the LE is in an addition of three binary numbers mode. Specifically, the claim 10 recites "*the multiplexer selects the signal determined in the previous LE when the LE is set to operate in an addition of three binary numbers mode.*" Accordingly, it is clear that the operational mode of the LE determines when the signal from the previous LE is chosen. As described above, the operational mode of the adder 35 has no impact on the signal selection by MUX 33.

For at least these reasons, claim 10 is allowable over Cohen. As claim 10 is allowable, dependent claims 11-17 are also allowable for at least the same rationale.

**Claim Rejections under 35 USC § 103(a), Cohen in view of Rothman**

Claims 12-25, 27-29 and 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen et al. (5,511,017) in view of Rothman et al. (5,898,602).

**Claim 14**

In addition to being allowable for being dependent on claim 10, claim 14 is allowable for additional reasons. For example, claim 14 recites "*wherein the previous LE comprises a second logic circuit that determines a carry of an n-th bit of three binary numbers in a carry save adder process, wherein n is an integer.*"

At page 4, the Office Action asserts that the previous logic element is elements (47,50,62,64,68) of Cohen. These elements perform a carry for the numbers X and Y, i.e. two numbers. See Cohen, FIG. 6 and col. 6 lines 13-17. In contrast, claim 14 recites "*a carry of an n-th bit of three binary numbers.*"

Note that Rothman is cited for the implementation of LUTs to perform certain operations. This teaching fails to make up for the above deficiency in Cohen.

For at least this additional reason, claim 14 is allowable over Cohen and Rothman, either alone or in combination.

Claim 29

Applicants submit that claim 29, as amended, is allowable for at least the same reasons as claim 2. As claim 29 is allowable, claims 31-36, which depend therefrom, are allowable for at least the same reasons.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

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